

Title (en)

Process for producing silicon carbide single crystal

Title (de)

Verfahren zur Herstellung von Siliziumkarbideinkristall

Title (fr)

Procédé de fabrication de carbure de silicium monocristallin

Publication

**EP 1439246 B1 20080625 (EN)**

Application

**EP 04007217 A 20010406**

Priority

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Abstract (en)

[origin: EP1143033A2] A process for preparation of silicon carbide by depositing silicon carbide on at least a part of a surface of a substrate having on its surface undulations extending approximately in parallel with each other, wherein a center line average of said undulations is in a range of from 3 to 1,000 nm, gradients of inclined planes of said undulations are in a range of from 1 DEG to 54.7 DEG , and, in a cross section orthogonal to a direction along which the undulations are extended, portions at which neighboring inclined planes are brought in contact with each other are in a curve shape. The substrate is silicon or silicon carbide having a surface with a plane normal in a crystallographic <001> orientation, having  $\bar{a}001\bar{u}$  planes accounting for 10 % or less of the entire area of the surface, etc. Also claimed is a single crystal silicon carbide having a planar defect density of 1,000 /cm<sup>2</sup> or lower, or having an internal stress of 10 MPa or lower. <IMAGE>

IPC 8 full level

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